BlueGene Consortium
Hardware Breakout Slides
27 April 2004

Contains:

1. Questions for the breakout
2. Summary of the breakout for the entire group

Hardware Breakout Goals

- Configuration, Purchasing and Support discussion
  - IBM-led discussion (see those slides)

- Consortium activities discussion on community-based:
  - Configuration
  - Purchasing
  - Installation
  - Ongoing management

Hardware Breakout Questions - Configs

- Does the proposed coordinated purchase model work?
  - If so, how many sites are interested in participating?
  - If not, what do we need to change?
- Of these sites, who can consider supporting:
  - Consortium application collaborators?
  - Development activities?
  - Testbed activities?
- Can we converge on common configurations?
  - Storage is the interesting part.

Hardware Breakout Questions - Community

- What can we as members of the consortium do to support each other in configuration, installation, and management?
  - The installation Swat Team
  - Newsgroup/mailing list community for “level 0” support
  - Documentation archives
  - Meetings or shared activities of some types
    - Quarterly consortium meetings
  - Consortium-organized training

Hardware Breakout - whole group summary

- Configuration, Purchasing and Support discussion
  - IBM-led discussion
  - 1 rack config is:
    - $2.4M if you go it alone and get a fully-loaded, supported system
    - $2M “target” as part of a consortium-coordinated purchase
      - Minimum of 9 racks across coordinated purchases
      - Timeline: intent in Sep, PO in Nov, deliver in April
      - Level 1 support provided by ANL as part of consortium

- Consortium activities and coordination in systems installation and management discussion.

Hardware Breakout summary - funding

- Funding
  - $2M price point is a high reach
    - Will require grant-based funding.
    - The timeframe of Sep / Nov is hard to align with grant funding.
  - $1M potential price point is more feasible
    - At universities, this can be done with faculty-based support.
    - Would require a strong apps-based argument for BG/L value.
    - Waiting for 6m after purchase makes this difficult.
    - Will be competing against departmental and centralized clusters.
      - Incremental add-on is a feature clusters have that helps them.
  - Small price point is of broad interest
    - 1/2 rack may not be small enough (see above)
    - Lots of interest in a 64-node workstation for universities and labs, could be used for experiments, porting, demonstrating value, building community…
  - 12 sites expressed interest in pursuing a BG/L installation, but all agreed with the above concerns.
    - Sites would want to install the hardware at their site.

Hardware Breakout summary - management

- (Not much time put into this part of the discussion.)

- Basic plans of having a community of systems administrators make sense
  - Email, web site and community archives
  - Teams of admins from across the sites to assist with new installs, debugging.

- Concerns about:
  - Level of required commitment by sites
    - Consortium involvement would be participation in mailing lists, some meetings, and possibly some small amount of the Level 1 support.
  - FTEs necessary to manage a system
    - LLNL is planning on having one dedicated FTE for the 64-rack system (but builds on existing staff in operations, storage, etc)
    - 1 FTE, or less (depending on user community) likely for 1-rack systems
      - Expect some fairly substantial spin-up required, however

Hardware Breakout - Next Steps

- Actions:
  - IBM: to consider alternative models, perhaps at different price points.
  - The community: to get creative, stay optimistic.

- Next steps
  - Once other options become feasible (6-8 weeks, perhaps), organize a conference call for consortium sites that are interested in pursuing a purchase.
  - Build community of sysadmins once hardware installations become settled.